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Verify that this is the correct version before use

Compliance is Mandatory

EMERGENCY PREPAREDNESS PLAN APPENDIX 5, JSC AIRCRAFT MISHAP PLAN

**Responsible Office: Flight Crew Operations Directorate, Aviation
Safety Office**

Original Signed by:

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1 PURPOSE

The purpose of this plan is to provide the initial responses to aircraft or aircraft-related mishaps, or high-visibility close calls. These actions are required to prevent further injury to personnel and/or damage to equipment, and preserve evidence to support a thorough investigation of the incident. Refer to NPR 8621.1 for the longer term investigation and reporting requirements for mishaps or close calls.

2 APPLICABILITY

This JWI is applicable to all JSC NASA organizations, including Ellington Field, and the Sonny Carter Training Facility, except for White Sands Test Facility, Office of Inspector General, and NASA Engineering and Safety Center offices at JSC. This JWI is applicable to contractors to the extent described in their contract.

3 AUTHORITY

This instruction is required by:

- NPR 8621.1, NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping, paragraph 1.4.7a
- JPR 1040.4, JSC Emergency Preparedness Program Procedural Requirements

4 APPLICABLE DOCUMENTS

NPR 1441.1, NASA Records Retention Schedule

NPR 7900.3, Aircraft Operations Management

NPR 8621.1, NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping

JPR 1700.1, JSC Safety and Health Handbook

JSC 29406, JSC Mishap Investigation Board Handbook

AOD 33808, Impounding Aircraft, Components, and Maintenance Documentation

AOD 33925, Operations Duty Officer (ODO) Instructions

5 SAFETY PRECAUTIONS AND WARNING NOTES

Hazardous materials integrated into aircraft systems can present a potential safety and health hazard to personnel responding to mishaps. Hazardous materials on aircraft may include various flammable liquids such as jet fuel and oils, and other hazards such as composite materials, batteries, pyrotechnics and liquid oxygen. Table 1 lists the common hazardous materials on NASA Aircraft Operations Division (AOD) aircraft. All mishap response personnel should identify hazardous materials associated with a mishap prior to approaching the mishap scene. Identify specific aircraft hazards such as payload/cargo unique by consulting with aircraft technicians. During aircraft fires, do not approach the aircraft unless trained and equipped in aircraft fire fighting and rescue operations. Approach the aircraft only after receiving clearance from the Incident Commander.

Some hazardous materials require the use of Personal Protective Equipment (PPE) to reduce the risk of exposure to hazardous materials. PPE such as safety glasses, chemical gloves, and respirators are available in the crash kit.

Table 1. Hazardous Materials Associated With AOD Aircraft

AIRCRAFT	FUEL	OIL	OXYGEN	BATTERY	PYROTECHNICS
T-38	JP 8 – 600 gal	5606 – 2.5 gal	LO2 – 10 Liters	1 Lead Acid	Ejection seat and canopy jettison system
STA	Jet A – 3538 gal	Skydrol – 15 gal Exxon 2380 – 4 gal	O2 – 96 cu. ft.	2 NICAD	Fire extinguisher actuating device
WB-57	Jet A – 3876 gal	MIL-L-7808 – 8.64 gal	LO2 – 20 Liters	1 NICAD + 2 NICAD Sys. Backup	1. Ejection seat and canopy jettison system 2. Fire extinguisher actuating device
SCA	Jet A – 22,000 gal (normal load)	Skydrol – 220 gal 10 gal spare onboard	O2 – 342 cu. ft.	3 NICAD	Fire extinguisher actuation device
C-9	Jet A – 3750 Gal	MIL 23699 – 6.5 Gal Skydrol – 17 Gal	O2 – 143 cu. ft.	2 NICAD	Fire extinguisher actuating device

6 TOOLS, EQUIPMENT, AND MATERIALS

6.1 Emergency Response Kit

An Emergency Response Kit is available for response to aircraft mishaps. The kit contains initial response items that may be useful to assist in site securing, evidence collection, and personal safety. Items that are not contained in the kit that are available to the IRT are a digital camera and GPS radio. The kit contents are specified in Table 2.

Table 2. Emergency Response Kit Inventory

DESCRIPTION	QTY	DESCRIPTION	QTY
On-Scene Commander Vest	1	Masking Tape (rolls)	2
JSC Aircraft Mishap Plan	1	Wood Stakes (2 ft)	16
First Aid Kit	1	Sample Bottles – Oil with tubes	3
Portable Halon Fire Extinguisher	1	Sample Bottles – Fuel	3
Rain Gear (sets)	2	Zip Lock Bags – 8 inch (package)	2
Leather Working Gloves (pair)	2	Zip Lock Bags – 12 inch (package)	1
Insect Repellent	2	Tags – Red (package) with tie straps	1
Tape Measure (100 ft)	1	Tags – White (package)	1
Chalk – White Bundle	1	Pocket Knife – Swiss Army	1
Ball Point Pens – Black	6	Hunting Knife with Sheath	1
Marker Pens – Black	3	Safety Goggles (pair)	2
Marker Pens – Red	3	Hammer	1
Clipboard	3	Cassette Tape Recorder	1
Graph Paper (pads)	2	Bullhorn Megaphone (Safety Vehicle)	1
Tablet Paper (white pad)	1	Binoculars (Safety Vehicle)	1
Drafting Scale	1	35mm Fixed Lens/Focus Camera	1
Ruler – 12 inch	1	AA Batteries – Spare	2
Hand Held Safety Lights	2	Drafting Triangle	1
“Caution Keep Out” Barrier Tape	3	Magnetic Navigation Compass	1
Grid Map – On Field	1	Digital Voice Recorder (ASOFF)	1
Grid Map – Off Field	1	GPS/Radio (Ground Safety Office)	2

6.2 Mishap Investigation Kit

The mishap investigation kit is maintained by the Ground Safety Office and is located in the Crash Trailer at AOD. Access to the kit is maintained by Maintenance Control.

6.3 Crash Trailer Inventory

The Crash Trailer inventory is specified in Table 3.

Table 3. Crash Trailer Inventory

DESCRIPTION	QUANTITY
Conex shipping container	1
1. T.O. 00-105E-9	1 CD
2. T.O. Binder	
a. 35D5-5-3-11	1 EA
b. 35D6-1-106	1 EA
c. 35E11-82-11 & S-1	1 EA
d. T-38(N)-2CL-1	1 EA
e. NAVAIR 01-C9B-2-7	1 EA
f. AOD 33922	1 EA
g. T.O. 1T-38A-3, Section I	1 EA
h. GII MM, Chapters 7 & 9	1 EA
3. JSC 05900	1 EA
4. Winch puller	1 EA
5. Crash axe	3 EA
6. Rags	1 EA
7. Rope	1 Bundle
8. Air hose, high volume	1 Roll
9. Hard Hats	12 EA
10. Insect repellant	7 EA
Crash Investigation Kits (inventory by Safety)	1
Sling Box 520610-04-09	1
6" x 20' slings (3 Regular)	3
Shackles (5 regular)	5
Sling box 520610-04-10	1
6" x 20' slings (3 regular)	3
Shackles (5 Regular)	5
Power blower S/N 2904	1
Power blower S/N 2905	1
Main landing gear strut buddy wheel	
Lower half	2
Upper half extender	1
T-38 Hoist Kit, blue box	
a. Hoist assembly	1
b. Jack pads (7 each, 5 reg 2 cut off)	7
c. Miscellaneous attaching hardware	1 Bag

7 TRAINING AND CERTIFICATION

7.1 Mishap Plan

This plan shall be rehearsed annually as a full-up simulation or tabletop exercise. At the conclusion of the rehearsal, the Aviation Safety Office shall summarize the findings of the exercise for distribution to all participants and coordinate updates to the plan with responsible organizations.

7.2 Mishap Investigation Training

All personnel assigned to investigate a mishap or high-visibility close call, at a minimum, shall complete or have completed within the last year, the “Introduction to Mishap Investigation” course available through System for Administration, Training, and Educational Resources for NASA (SATERN).

7.3 Incident Commander Training

The NASA Incident Commander will normally be a current or former aviation safety officer with training in mishap investigation. In addition, to be prepared to assume the role of incident commander as the a member of the Interim Response Team (IRT) or the Mishap Investigation Team, an individual shall have training in the National Incident Management System (NIMS). The following courses are required to be considered fully trained:

- A. IS-100 – Introduction to the Incident Command System
This course is available online at <http://training.fema.gov/emiweb/is/is100a.asp>.
- B. IS-200 – Incident Command System for Single Resources and Initial Action Incidents
This course is available online at <http://training.fema.gov/emiweb/is/is200a.asp>.
- C. IS-300 – Intermediate Incident Command
This course is only available through classroom instruction.
- D. IS-400 – Advanced Incident Command
This course is only available through classroom instruction
- E. IS-700 – National Incident Management System: An Introduction
This course is available on-line at <http://training.fema.gov/emiweb/is/is700a.asp>.
- F. IS-800 – National Response Framework: An Introduction
This course is available on-line at <http://training.fema.gov/emiweb/is/is800b.asp>.

8 RESPONSIBILITIES

8.1 Center Director

Duties required of the Center Director, in the event of a mishap, are specified in NPR 8621.1 and are summarized below. Specific steps are provided in Appendix L.

- A. Personally report, by telephone or e-mail, to the Administrator within 24 hours of notification of the instance of any NASA Type A mishap, any NASA Type B mishap, and a NASA Type C mishap only if it involves a lost-time injury or illness. Personally report, by telephone or e-mail, to the Administrator when it becomes known that there is any off-the-job fatality or serious injury/illness of a NASA civil service employee or resident contractor.
- B. Serve as the appointing official for Type A mishaps and Type B mishaps occurring at, or managed by, his/her Center. Determine the type of investigating authority [i.e., Mishap Investigation Board (MIB), Mishap Investigation Team (MIT), or Mishap Investigator (MI)] that will investigate a mishap or close call. Obtain concurrence from the Chief/Office of Safety and Mission Assurance (OSMA) and the Chief Engineer on the MIB membership of Type A, Type B, high-visibility mishaps, and high-visibility close calls in which he/she is the appointing official. Generate a formal memorandum for Type A mishaps, Type B mishaps, high-visibility mishaps, and high-visibility close calls that communicates the appointment of the investigating authority members, the chairperson, the ex officio, and the advisors.
- C. Serve as or designate the appointing official and document the designee(s) in the Mishap Preparedness and Contingency Plan for Type C mishaps, Type D mishaps, and close calls.
- D. Provide administrative and logistical support for the investigating authority. Ensure that the mishap investigation process for the assigned mishap or close call is properly completed.
- E. Serve as an endorsing official for mishaps and close calls in which he/she is the appointing official. Verify that the mishap report is reviewed, endorsed, and authorized for public release. Distribute the authorized mishap report per NPR 8621.1.
- F. Assign the responsible organization(s)/program(s)/project(s) to develop the Corrective Action Plan (CAP), implement the CAP, and generate the lessons learned. Ensure that the CAP is developed and implemented.

8.2 Director, Flight Crew Operations Directorate

Duties required of the Director of Flight Crew Operations, in the event of a mishap, are specified in NPR 8621.1 and are summarized below. Specific steps are provided in Appendix F.

- A. As designated, serve as the appointing official for Type C mishaps, Type D mishaps, and close calls. Generate a formal memorandum that communicates the appointment of the investigating authority member(s), the chairperson, the ex officio, and the advisors.
- B. Provide administrative and logistical support for the investigating authority. Ensure that the mishap investigation process for the assigned mishap or close call is properly completed.
- C. Serve as an endorsing official for mishaps and close calls in which he/she is the appointing official. Verify that the mishap report is reviewed, endorsed, and authorized for public release. Distribute the authorized mishap report per NPR 8621.1.
- D. Assign the responsible organization(s)/program(s)/project(s) to develop the CAP, implement the CAP, and generate the lessons learned. Ensure that the CAP is developed and implemented.

8.3 Chief, Aircraft Operations Division

Duties required of the Chief of the Aircraft Operations Division, in the event of a mishap, are specified in NPR 8621.1 and are summarized below. Specific steps are provided in Appendix E.

- A. Assist the investigating authority as requested.
- B. Notify the National Transportation Safety Board (NTSB) of a mishap involving aircraft per paragraph 1.6.6 of NPR 8621.1. Within 10 workdays of an aircraft mishap or close call that meets the reporting requirements, submit an NTSB Form 6120 to the NTSB regional office nearest to the location of the mishap or close call.
- C. Secure and safeguard personal effects and sensitive information related to injured or deceased individuals.
- D. Initiate drug testing after a mishap if the mishap results in a fatality or personal injury requiring immediate hospitalization or in damage estimated to be in excess of \$10,000 to government or private property.
- E. When tasked by the appointing official, develop the CAP, implement the CAP, support the Center Safety Office personnel as they verify that the CAP has been completed, and generate the lessons learned.

8.4 Chief, Astronaut Office

Specific steps to be taken by the Chief of the Astronaut Office, in the event of a mishap, are provided in Appendix G.

Secure and safeguard personal effects and sensitive information related to injured or deceased individuals.

8.5 Director, Human Resources

Duties required of the Director of Human Resources, in the event of a mishap, are specified in NPR 8621.1 and are summarized below. Specific steps are provided in Appendix K.

In the event of fatalities, support notification of next of kin.

8.6 Director, Public Affairs Office

Duties required of the Director of Public Affairs, in the event of a mishap, are specified in NPR 8621.1 and are summarized below. Specific steps are provided in Appendix J.

Coordinate with the Center Director the release of all information to the press and public regarding the mishap or close call. As appropriate, disseminate any preliminary information, video, and imagery to the public relating to the mishap.

8.7 Director, Center Operations Directorate

Duties required of the Director of the Center Operations Directorate, in the event of a mishap, are specified in NPR 8621.1 and are summarized below. Specific steps are provided in Appendix I.

Support the Incident Commander, Center Safety Office, and Interim Response Team in securing the mishap site and impounding data, records, equipment, and facilities.

8.8 Chief, Aviation Safety Office

Duties required of the Chief of the Aviation Safety Office, in the event of a mishap, are specified in NPR 8621.1 and are summarized below. Specific steps are provided in Appendix D.

- A. In the event of a mishap, initiate, facilitate, and coordinate all investigation activities per this plan.
- B. After the emergency response has been initiated, within one hour of the occurrence of a Type A mishap, Type B mishap, high-visibility mishap, or high-visibility close call, the Center Safety Office shall notify NASA Headquarters Office of Safety and Mission Assurance (OSMA)/Safety and Assurance Requirements Division (SARD).
- C. Within 8 hours of a work-related mishap involving death of a Federal employee, or the hospitalization for inpatient care of three or more employees (provided at least one is a Federal employee), the Center Safety Office shall notify Occupational Safety and Health Administration (OSHA).
- D. Ensure that mishap and close call information is entered in the Incident Reporting Information System (IRIS) per the requirements outlined in NPR 8621.1.
- E. Support the incident commander as he/she safes and secures the mishap.
- F. Impound data, records, equipment, and facilities.
- G. Verify the CAP is complete and all elements of the investigation have been completed.

8.9 Chief, Space Medicine Division

Duties required of the Chief of Space Medicine, in the event of a mishap, are specified in NPR 8621.1 and are summarized below. Specific steps are provided in Appendix H.

- A. Support the Interim Response Team subsequent to an aircraft accident.
- B. Initiate drug testing after a mishap if the mishap results in a fatality or personal injury requiring immediate hospitalization or in damage estimated to be in excess of \$10,000 to government or private property.
- C. In the event of fatalities, support notification of next of kin.
- D. In the case of mishap related injuries resulting in crewmember hospitalization, contact the treating facility, determine medical status, and communicate to NASA management.
- E. Support the mishap investigation team.

9 PROCEDURES

9.1 Definition of Mishaps and Close Calls

A NASA mishap is defined as an unplanned event that results in at least one of the following:

- A. Injury to non-NASA personnel caused by NASA operations
- B. Damage to public or private property caused by NASA operations
- C. Occupational injury or occupational illness to NASA personnel
- D. NASA mission failure before scheduled completion of the planned primary mission
- E. Destruction of or damage to NASA property

Mishaps are defined by the level of injury or cost of damage. Refer to Table 4 for definitions of each mishap level. The scope of actions taken in the wake of a mishap is contingent on the level of mishap.

The following are not considered NASA mishaps:

- A. Malfunction or failure of components subject to normal wear and tear provided there was adequate preventative maintenance and the damage was limited to the component.
- B. Destruction of or damage to equipment as a direct result of weather conditions (e.g., hurricane, lightning, or hail) or natural phenomena (e.g., flood).

A NASA close call is defined as an event with the potential to cause a mishap in which there is:

- A. No injury or only minor injury requiring first aid
and/or
- B. No equipment/property damage or minor equipment/property damage (less than \$1,000)

A high-visibility close call is defined as those close calls which possess a high degree of programmatic impact or public, media, or political interest.

9.2 Use of this Instruction

9.2.1 Priority of Actions

The priorities for the initial response to a mishap are, in order:

1. Protection of human life
2. Protection of resources
3. Preserving evidence
4. Timely reporting

Each organization with aircraft mishap responsibilities has provided a checklist of actions to be taken by the organization in the event of a mishap. These checklists are provided in separate appendices and shall be initiated upon notification of mishap occurrence.

Each step in the checklist is preceded by the level of mishap to which the step applies. For example, a step that applies to all levels of mishap will be designated (A/B/C/D). Steps that only apply to Type A and B mishaps will be preceded by (A/B) only. See Table 4 (refer to NPR 8621.1).

Table 4. Mishap Classification Levels

CLASSIFICATION LEVEL & INVESTIGATION TYPE	PROPERTY DAMAGE	INJURY
Type A Mishap	Total direct cost of mission failure and property damage is \$1,000,000 or more, or Crewed aircraft hull loss has occurred, or Occurrence of an unexpected aircraft departure from controlled flight (except high performance jet/test aircraft such as F-15, F-16, F/A-18, T-38, OV-10, and T-34, when engaged in flight test activities).	Occupational injury and/or illness that resulted in: A fatality, or A permanent total disability, or The hospitalization for inpatient care of 3 or more people within 30 workdays of the mishap.
Type B Mishap	Total direct cost of mission failure and property damage of at least \$250,000 but less than \$1,000,000.	Occupational injury and/or illness has resulted in permanent partial disability. or The hospitalization for inpatient care of 1-2 people within 30 workdays of the mishap.
Type C Mishap	Total direct cost of mission failure and property damage of at least \$25,000 but less than \$250,000.	Nonfatal occupational injury or illness that caused any workdays away from work, restricted duty, or transfer to another job beyond the workday or shift on which it occurred.
Type D Mishap	Total direct cost of mission failure and property damage of at least \$1,000 but less than \$25,000.	Any nonfatal OSHA recordable occupational injury and/or illness that does not meet the definition of a Type C mishap.
Close Call	An event in which there is no equipment/property damage or minor equipment/property damage (less than \$1,000), but which possesses a potential to cause a mishap.	An event in which there is no injury or only minor injury requiring first aid, but which possesses a potential to cause a mishap.

9.3 Document Changes

Changes to this document shall be coordinated through the Aviation Safety Office at the Aircraft Operations Division.

10 RECORDS

All records obtained during the mishap investigation shall be maintained by the mishap investigation authority until completion of the investigation.

At the conclusion of the mishap investigation, all records shall be stored in accordance with NPR 8621.1, paragraph 7.8 and NPR 1441.1.

11 APPENDICES

Appendix A: AOD Operations Duty Officer

Appendix B: Interim Response Team

Appendix C: Mishap Investigation Team

Appendix D: Aviation Safety Office

Appendix E: Aircraft Operations Division

Appendix F: Flight Crew Operations Directorate

Appendix G: Astronaut Office

Appendix H: Medical Action Plan

Appendix I: Center Operations Directorate

Appendix J: Public Affairs Office

Appendix K: Human Resources Office

Appendix L: Director, Johnson Space Center

Appendix M: Aircraft Essential Information

Appendix N: JSC 05900 Attachment 5 Change Record History

APPENDIX A OPERATIONS DUTY OFFICER

The following actions should be taken whenever notified of a JSC aircraft/aircraft-related mishap or potential mishap. Log your actions for future lessons learned.

1. (A/B/C/D) Collect essential information (use Appendix M, Aircraft Mishap Essential Information). Log all pertinent events starting with the first notification of the mishap.

Subsequent actions will be based on the type of mishap. Refer to Table 4 to determine the type of mishap. If in doubt, contact the AOD Chief, Aviation Safety Office Chief, or the Aviation Safety Office for a decision whether and/or how to activate this Mishap Plan. If none of these individuals can be reached, you may call other appropriate individuals for advice.

2. (A/B/C/D) Activate emergency response, if required (at EFD x44444).
3. (A) Activate search and rescue, if required.
4. (A/B/C/D) Initiate contact with local authorities if the mishap is not at Ellington Field. Common locations for NASA T-38 operations are listed in A-7.
5. (A/B/C/D) Ensure notification of key personnel.
 - a. (A/B) Use Appendix A, page 15.
 - b. (C/D) Use Appendix A, page 16.
6. (A) Inform members of the Interim Response Team (IRT) to report to the Duty Office in Building 276 prior to proceeding to the accident site. This team shall consist of the following.
 - a. Aviation Safety Officer
 - b. Quality Assurance and/or the Space Shuttle Safety and Mission Assurance Office
 - c. Public Affairs Office
 - d. JSC Security
 - e. JSC Flight Surgeon
 - f. JSC Photographer

7. (A/B) Following initial notification of key personnel, proceed to NASA operations at Ellington Field (if not already there) and assume the duty unless otherwise directed.
8. (A/B) Refer to Table 1 to determine normal materials and explosive devices for the type of aircraft. Determine what other hazardous materials, if any, were carried aboard the aircraft. Be prepared to brief first responders and the IRT what materials will be encountered. Ensure IRT has proper personal protection equipment (PPE) before departing to accident site.
9. (A/B/C/D) Determine if classified equipment or material was carried aboard the aircraft. If necessary, inform JSC Security to coordinate protection of classified equipment and materials.
10. (A/B) Arrange, as required, transportation to the mishap scene for the IRT.
11. (A/B/C/D) Take custody of such materials as may be delivered to you for the use of the Mishap Investigation Board until relieved of this responsibility by the Board Chairman or the Safety Officer.

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Aircraft Type A or B Mishap Notification

Upon notification of a JSC aircraft mishap, coordinate search and rescue per A-5 first, if appropriate. Then notify the following personnel in order as soon as possible. Briefly inform each person of the details. Attempt each number only once before going on to the next number. Inform each succeeding person of anyone not contacted.

CONTACT	TIME NOTIFIED	OTHER PERSON TAKING CALL
Chief, Aircraft Operations Division		
Director, Flight Crew Operations Directorate		
Chief, Astronaut Office (If Astronaut Office personnel involved)		
FCOD, Aviation Safety Officers (minimum 2)		
JSC Emergency Dispatch Center Phone: 281-483-3333		
Chief, Flight Medicine		
Deputy, Aircraft Operations Division		
Flight Medicine Clinic (duty hours) Phone: 281-483-7999		
Medical Officer of the Day (after duty hours) Pager: 888-439-2084		
Chief, AOD Aircraft Maintenance Branch		
AOD Assistant Branch Chief, Quality Assurance Section		
AOD Assistant Branch Chief, Aircraft Systems		
Chief, AOD Engineering Branch		
Chief, AOD Flight Operations Branch		
JSC Photographic Assistance		

Aircraft Type C or D Mishap Notification

Upon notification of a JSC Type C or D aircraft mishap, notify the following personnel in order as soon as practical. Briefly inform each person of the details. Attempt each number only once before going on to the next number. Inform each succeeding person of anyone not contacted.

CONTACT	TIME NOTIFIED	OTHER PERSON TAKING CALL
Chief, Aircraft Operations Division		
Director, Flight Crew Operations Directorate		
FCOD Aviation Safety Officer		
Deputy, Aircraft Operations Division		
Chief, AOD Aircraft Maintenance Branch		
AOD Assistant Branch Chief, Quality Assurance Section		
AOD Assistant Branch Chief, Aircraft Systems		
Chief, AOD Engineering Branch		
Chief, AOD Flight Operations Branch		

Search and Rescue (SAR) Activation

Call the following agencies if SAR has not been activated or if in doubt.

NOTE

Inform ASO or AOD Chief of any SAR actions taken.

AGENCY	TELEPHONE	HOURS	PERSON CONTACTED
(IF OVER WATER) United States Coast Guard (USCG) District 8 Operations Center (New Orleans, LA) ¹	(504) 589-6225	24-hour	
Army National Guard (ANG) Command Post	(281) 929-2716/2719 Courtesy call if in their working area	24-hour	
ANG Command Post	(281) 464-8101 Courtesy call if in their working area	24-hour	
United States Air Force (USAF) Rescue Control Center (RCC) Langley	1-800-851-3051	24-hour	
¹ For overwater SAR activities in the local area, also contact the local USCG unit at Ellington Field at (713) 578-3000. This unit will help facilitate the search operation and will speed up the reaction time.			

Emergency Preparedness Plan –
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Off-Site Mishap Assistance^{1, 2}

AIRPORT	INFO OPERATOR	COMMAND POST	TOWER	BASE OPS	HOSPITAL	SEARCH AND RESCUE	SECURITY	CORONER
Andrews AFB, MD (ADW)	301-981-1110	301-981-5058 -5059	240-857-4808	301-981-3411	240-857-2333	301-981-5058 -5059	301-981-2001	
Biggs AAF, TX (Fort Bliss, BIF)	DSN 915-978-8031		915-568-8870	915-568-8088 -8097	MED EVAC 915-568-8833			
Edwards AFB, CA (EDW)	661-277-8113	661-277-3040	661-277-2121	661-277-2222 -3571 -4185	Ambulance Control 661-277-2330		661-277-3340	Mortuary Affairs 661-277-3841
El Paso, TX (ELP)	915-555-1212	ELP Airport 915-772-4271	915-772-7441	ELP Airport 915-772-4749 -4750 NASA 915-782-5220	Del Sol Medical Center 915-595-9000 -9201 -9202	915-778-7405	ELP Airport 915-772-4749 -4750 ELP Police 915-564-7000	
Glenn Research Center, OH (Cleveland Hopkins Airport, CLE)	Cleveland Airport 216-265-6030		Cleveland Airport 216-898-2028	Air Svcs 216-267-3711 NASA 216-433-2031	Fairview 216-476-7000 Southwest General 440-816-8000	NASA 216-433-2088	Airport Police 216-265-6055 NASA 216-433-3023	
Holloman AFB, NM (HMN)	505-572-1110	505-572-7575	505-572-7125	505-572-5411	Ambulance response 505-572-3260	DWH 505-572-7040	505-572-7171	
Huntsville, AL (HSV)	256-772-9395		256-774-2600	Signature Av 256-772-9341		256-772-9395	Airport Authority 256-772-9395	
Navy Andrews	301-987-1110		240-857-4808	240-857-2740	Medical Clinic 240-857-4811		240-857-2695	
Northrop Strip, NM (WSMR)	505-524-5011		505-524-5255	DWH 505-678-3803		505-524-5641	505-678-2031	
Patrick AFB, FL (COF)	321-494-1110	321-494-7001	321-494-4323	321-494-2222	Clinic appt line 321-494-8241	321-494-2217	321-494-2008	321-633-1981
Redstone AAF, AL (HUA)	256-876-2151		256-842-6283	256-876-1916 -4290	Fox Army Health Center Appt line 256- 955-8888		256-876-2222	
Shuttle Landing Facility, FL (X68)		321-867-2100	321-861-1305	321-867-2100 Shellye 321-861-1300	KSC Clinic 321-867-3346 Flight Docs 321-867-3360	321-867-2121	321-867-2121	
Tyndall AFB, FL (PAM)	850-283-1113	850-283-2155	RAPCON 850-283-4045	850-283-4244	Admin Services 850-283-7527/7000		850-283-2254	

¹Ensure ASO or AOD Duty Officer is notified when any of the following agencies are contacted.

²All numbers are commercial.

APPENDIX B INTERIM RESPONSE TEAM

An Interim Response Team (IRT) will be formed to respond to a major aircraft accident (Type A). Membership will include:

- A. Aviation Safety Officer (This individual will perform the duties of incident commander once the mishap scene has been turned over to NASA for the mishap investigation.)
- B. Quality Assurance and/or the Space Shuttle Safety and Mission Assurance Office
- C. Public Affairs Office
- D. JSC Security
- E. JSC Flight Surgeon
- F. JSC Photographer

Upon arrival at the mishap scene, IRT responsibilities include the following:

1. Immediately arrange medical aid, if required. Initiate Medical Action Plan (Appendix H). It is expected that immediate medical care and evacuation will be provided by local emergency medical services. The JSC flight surgeon will proceed to the medical facility caring for injured crewmembers. The flight surgeon will determine the nature of injuries and fatalities and notify JSC medical management.

If there are crewmember fatalities, the flight surgeon will contact the local coroner and determine if the coroner will release the remains to Armed Forces Institute of Pathology (AFIP) for post-mortem evaluation.

The flight surgeon will request appropriate toxicological testing for crewmembers involved in the accident.

2. Assist the incident commander, as requested. The initial incident commander will likely be the first responders to the incident (fire department or police department). Only after the scene is safe will NASA be given command over the accident site. The IRT should be prepared to provide the incident commander with the hazards associated with the wreckage (i.e., explosives, hazardous materials) and help safe the hazards.

WARNING

- EJECTION SEATS AND CANOPY JETTISON MECHANISMS ARE POTENTIAL EXPLOSIVE HAZARDS.
- NO SMOKING. FIRE HAZARD MAY EXIST.
- HAZARDOUS MATERIALS INCLUDE AIRCRAFT FUEL, BATTERIES, CERTAIN HYDRAULIC FLUIDS, LIQUID O₂, ALL PRESSURE VESSELS (INCLUDING TIRES), ANY CARTRIDGE (CO₂ AND PYROTECHNIC), FIBERS FROM COMPOSITE MATERIALS (POTENTIALLY QUITE HAZARDOUS ON CERTAIN TYPES OF AIRCRAFT), SHARP METAL PARTS, AND BROKEN GLASS.

Ask local police to help prevent any disturbance of the wreckage and to control access to the area pending arrival of the JSC security force. While accredited press representatives should not be prevented from doing their jobs, photography of deceased or seriously injured persons should be discouraged and all requests for information should be referred to the Public Affairs Office representative. Casual bystanders and even souvenir hunters may be expected to approach the mishap scene and should be kept well clear of the area. Advise all people of potential hazards.

3. Once control of the incident scene is given to the IRT, perform the following:
 - a. *Protect people on the scene from hazards.* Establish 24-hour access controls. The area should be roped off and steps taken to establish and maintain radio/telephone contact with the JSC Emergency Dispatch Center (EDC). Crash access security includes traffic control, personnel access, provision for an emergency vehicle lane, crowd control, and protection of evidence. Ensure that all authorized personnel are issued area badges for ease of identification. Badges are kept at the AOD Operations Duty Office/Maintenance Control and in the Aviation Safety Vehicle Emergency Response Kit.
 - b. *Establish communication with JSC and report status, if possible.* Request particular assistance as applicable to the situation [JSC EOC (281) 483-4658 or (281) 483-3333; AOD Operations Duty Officer (281) 244-7256].
 - c. *Preserve evidence, document the scene, and collect debris.* Ideally, a 1,500- to 2,000-foot radius around the crash site should be cleared of all unnecessary personnel. All debris should be left undisturbed until investigators, under the direction of the Mishap Board Chairman or the Aviation Safety Office, can

conduct their investigations. The exact position and condition of every part of a crashed aircraft can be very important in cause determination. If necessity (not convenience) dictates that the wreckage be moved without the consent of the Mishap Board, the position and condition of the wreckage must be documented. Photographs and a diagram correctly depicting the location and condition of each piece of wreckage prior to movement are highly desirable. Only Federal employees on the IRT shall support the Center Safety Office in impounding data. Advise the supervisor if drug testing should be requested. Provide all available mishap data and evidence to the investigating authority.

- d. *Identify and locate any witnesses to the mishap.* Get names, addresses, and telephone numbers of anyone else who saw or heard the mishap or who knows someone who did. Interview (taped statements are preferred) or obtain written statements from crew members and other witnesses as soon as possible after the mishap. Only Federal employees on the IRT shall support the Center Safety Office in collecting witness statements. The following statement will be read to each witness at the start of the formal interview:

The purpose of this safety investigation is to determine the proximate cause(s) and root cause(s) of the mishap that occurred on _____ and to develop recommendations toward the prevention of similar mishaps. It is not our purpose to place blame or to determine legal liability. Your testimony is entirely voluntary, but we hope that you will assist the investigating authority to the maximum extent of your knowledge in this matter.

Your testimony will be documented and retained as part of the mishap report background files but will not be released with your name as part of the mishap report.

The investigating authority will make every effort to keep your testimony confidential and privileged to the greatest extent permitted by law.

For the record, please state your full name, title, address, employer, and place of employment.

- e. Notify the Center PAO about casualties, damages, and any potential hazards to the public, and notify legal advisors (as appropriate). Support the release of information to the press and media to alert Center personnel and the public of any known hazards and their potential effects, and provide instructions that will mitigate the risk and harm. The names of crew members involved will be regarded as restricted and privileged information, and not releasable to public files.

APPENDIX C MISHAP INVESTIGATION TEAM

All NASA mishaps will be investigated. The severity of the mishap will determine the degree of investigation. Minor personnel incidents or minor equipment damage may only require a supervisory investigation. Major mishaps will require formal boards of investigation.

The Aircraft Mishap Investigation Boards are established in accordance with the provisions of NPR 8621.1. Additional members may be added as required for a specific mishap. Advisors to the board may be requested as needed by the board chairman. The Safety and Mission Assurance Office will provide advisory services as requested. Mishap Investigation Board members must be relieved of other duties during the investigation. The most effective guides for aircraft mishap investigation and reporting are NPR 8621.1 and JSC 29406A. These documents are available in the Aviation Safety Office.

A board of investigation will be appointed for all Class A and B mishaps, and for those mission failures, test failures, and Class C or D mishaps or close calls that have sufficient programmatic, public, or political impact (i.e., high-visibility mishaps or close calls). This determination will be made by the JSC Director, FCOD Director, AOD Chief, or HQ personnel, as appropriate. For purposes of investigating and reporting, the board will remain autonomous.

Class C or D mishaps not of a significant public or higher-level management interest will be investigated at the appropriate level, as determined by either the FCOD Director or the AOD Chief. The FCOD Director or the AOD Chief will determine whether or not a board/team is needed and will select the appropriate board members.

Mishap Investigation Board Chairman Initial Responsibilities

Once an Aircraft Mishap Investigation Board has been convened, the chairman will:

1. (A/B/C/D) Ensure that all members of the board have been designated in writing and notified.
2. (A/B/C/D) Ensure all mishap board members have received required training. Specifically, at a minimum, all board members must complete or have completed within the last year, the "Introduction to Mishap Investigation" course available through System for Administration, Training, and Educational Resources for NASA (SATERN).

3. (A/B/C/D) Immediately assume responsibility for the mishap investigation, mishap report preparation, and preservation of the wreckage.
 - a. Except in cases where the wreckage interferes directly with vital civil or military functions (e.g., major highways or runways), the wreckage will not be moved or disturbed for at least 24 hours. During this period of time, the IRT will plot the wreckage distribution and obtain a photographic record of the scene of the mishap.
4. (A) Upon completion of the IRT's investigation at the scene, authorize the release of the wreckage to recovery personnel for removal to the reassembly site.
5. (A/B/C/D) Contact Aviation Safety Office for procedural help in setting up the investigation.

Further Responsibilities

The chairman will coordinate and direct the activities of the board in the following areas:

1. Operational tasks
 - a. (A/B/C/D) Take over from the AOD Operations Duty Officer as accident information center.
 - b. (A/B) Designate a room for mishap board meetings.
 - c. (A/B/C/D) Collect and evaluate material evidence.
 - d. (A/B/C/D) Gather operational data (weather, facilities status, aircraft maintenance records).
 - e. (A/B) Ensure that all public relations, legal, and other inquiries are routed through proper channels.
 - f. (A/B/C/D) Keep JSC Director, FCOD Director, and/or AOD Chief advised of the progress of the investigation.
 - g. (A/B/C/D) Review Aircraft Mishap Plan for functional accuracy. A statement to this effect should appear in the final report, as appropriate.
2. Personnel tasks
 - a. (A/B/C/D) Interview witnesses.
 - b. (A/B/C/D) Gather background information on crew members.
 - c. (A/B/C/D) Examine fatigue and its countermeasures as possible cause factors. A statement referring to this examination will be added to the final report.

3. Material tasks

- a. (A) Supervise wreckage recovery.
- b. (A) Ensure adequate facilities (hangar space) for reassembly of wreckage.
- c. (A/B/C/D) Analyze support equipment.
- d. (A) Ensure appropriate engineering investigations are conducted by aircraft depot and contractor facilities.

5. Medical tasks

- a. (A) Ensure appropriate post-mortem evaluations are conducted. NASA prefers to use the Armed Forces Institute of Pathology (AFIP) at the Dover Air Force Base (AFB) Port Mortuary, if possible.
- b. (A/B/C/D) Consider all human engineering aspects of the mishap.

6. (A) Expect to work with a qualified pilot to analyze all crew escape and survival equipment used in the mishap.

APPENDIX D AVIATION SAFETY OFFICE

The Chief, Aviation Safety Office (ASOFF) or the designated representative acts as the Center Safety representative for all aviation-related mishaps. Perform the following actions after a mishap:

1. Notify relevant authorities, as required.
 - a. (A/B) Contact NASA Office of Safety and Mission Assurance, Safety and Assurance Requirements Division (OSMA/SARD) *within 1 hour* of occurrence of a Type A, Type B, or high-visibility mishap or close call at (202) 358-0006. If no response or if after hours, call the NASA HQ After Hours Contact Center at (866) 230-6272.
 - b. (A/B) Advise the Chief, Aircraft Operations Division of requirements to contact the NTSB *immediately* following a reportable mishap, incident, or close call (refer to NPR 8621.1, paragraph 1.6.6 to determine the reportable incidents) at the Regional Office associated with the state in which the accident or incident occurred. Regional Offices can be found at (http://www.nts.gov/Abt_NTSB/regions/AVIATION.HTM).
 - c. (A/B) Contact the Occupation Safety and Health Administration (OSHA) *within 8 hours* of a work-related mishap involving the death of a Federal employee or hospitalization of 3 or more employees (at least one of whom is a Federal employee) at the area office nearest to the mishap or at (800) 321-6742.
 - d. (A/B/C/D) Within 24 hours, send electronic notification via the NASA Incident Reporting Information System (IRIS) of the mishap or high-visibility close call to include the following information: Center submitting report; author of report; author's phone number and mail code; date report submitted; time report submitted; incident date; incident time; incident general location; exact location (if known); responsible organization; organization's point of contact; point of contact's phone number and mail code; mission affected; program impact (if known); number and type of injuries or fatalities (if known); type of damage to equipment, flight hardware, flight software, or facilities; estimate of direct cost of damage; and a brief description of the mishap or close call.
 - e. (A/B) Ensure PAO has been notified about casualties, damages, and any potential hazards to the public.

Emergency Preparedness Plan –
Appendix 5, JSC Aircraft Mishap Plan

JWI No.: 1040.27

Effective Date: _____

Expiration Date: _____

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2. (A/B/C/D) Advise the Chief, Aircraft Operations to initiate drug testing per NPR 3792.1, NASA Plan for a Drug-Free Workplace, if the mishap results in a fatality or personal injury requiring immediate hospitalization, or in damage estimated to be in excess of \$10,000 to government or private property. Drug testing is coordinated through the NASA Shared Services Center (NSSC) at (877) 677-2123. The Human Resources Office will be notified at (281) 483-6251 when a decision is made regarding drug testing.
3. (A/B/C/D) Ensure the AOD Assistant Branch Chief, Quality Assurance Section impounds all records and materiel related to the mishap per AOD 33808.
4. (A) In the event of fatalities, advise the Chief, Aircraft Operations of the availability of employee crisis counseling for the workforce through the Employee Assistance Program (EAP) at (281) 483-6130 and the Human Resources Office at (281) 483-6251.
5. (A) Support the IRT as required.
6. (A/B/C/D) Support the mishap investigation as required.
7. (A/B/C/D) Ensure JSC Aircraft Mishap Plan functioned properly and make corrections if necessary.

APPENDIX E AIRCRAFT OPERATIONS DIVISION

AOD Chief or AOD Deputy Chief is responsible for compliance with all items in Appendix E.

1. (A/B) Coordinate the overall AOD response to the mishap. Ensure that the FCOD Director and JSC Director are informed when the telephone report to NASA HQ Safety is ready for transmission. (The Aviation Safety Office is responsible for reports and will advise the AOD Chief when the report is ready.)
2. (A) Keep the FCOD Director and the JSC Director fully informed of SAR progress, if applicable.
3. (A/B) Designate members of the IRT with the proper qualifications to support mishap scene investigation. An Aviation Safety Officer with mishap investigation training and preferably with NIMS training shall be designated the Incident Commander. In the absence of all designated Aviation Safety Officers, ensure that the functions of the Chief, Aviation Safety Office are performed (Appendix D).
4. (A) Contact the NTSB *immediately* following a reportable mishap, incident, or close call (refer to NPR 8621.1, paragraph 1.6.6 to determine the reportable incidents) at the Regional Office associated with the state in which the accident or incident occurred. Regional Offices can be found at (http://www.nts.gov/Abt_NTSB/regions/AVIATION.HTM).
5. (A/B/C/D) Direct relevant personnel to get drug testing if the mishap results in a fatality or personal injury requiring immediate hospitalization or in damage estimated to be in excess of \$10,000 to government or private property. To initiate drug testing, contact the NASA Shared Services Center (NSSC) at (877) 677-2123.
6. (A) Accompany FCOD Director, Flight Surgeon, and JSC Director (as desired) during the personal notification of the next of kin of AOD personnel, when required. Ensure that the Public Affairs Offices and Human Resources are informed when the next of kin are notified.
7. (A/B) Designate an Operations Assistant to perform the duties shown in Appendix E, page 32.
8. (A/B) Ensure that the basic circumstances of the mishap are understood throughout AOD and, particularly when serious injury or fatalities are involved, stress the need for minimizing rumors.

NOTE

In the event of casualties, consider the use of employee crisis counseling for the workforce through the Employee Assistance Program (EAP) at (281) 483-6130.

9. (A) Support the IRT as required.
10. (A/B/C/D) Support the mishap investigation as required.

AOD Aircraft Maintenance Branch, Chief

1. (A/B/C/D) Notify appropriate personnel within the Quality Assurance (QA) Section of the mishap and have aircraft records impounded as per AOD 33808, Impounding Aircraft, Components, and Maintenance Documentation.
2. (A/B/C/D) Notify the QA Representative(s) of the Mishap Investigation Board.

AOD Assistant Branch Chief, Quality Assurance Section

1. (A/B/C/D) Notify appropriate personnel within the QA Section of the mishap and have aircraft records and materiel related to the mishap impounded per AOD 33808.
2. (A/B/C/D) Notify the QA Representative(s) of the Mishap Investigation Board.
3. (A) Provide QA personnel to investigate the wreckage at the scene of the accident and to aid in the analysis of possible maintenance or material cause factors. Their activities will be directed by the Mishap Board Aviation Safety Office and/or the Mishap Board Chairman.
4. (A/B) Assume overall direction of salvage operations, taking care to preserve the wreckage for mishap investigation purposes. The wreckage should not be disturbed without concurrence of the Mishap Investigation Board Chairman or the Aviation Safety Office. If wreckage must be disturbed, an accurate record of its location and condition prior to being moved must be kept. Photographs of the original position must be made. After the on-scene investigation is complete, and when directed by the Mishap Board Chairman, move the wreckage to the wreckage reconstruction site and reassemble it under the direction of the Mishap Board.
5. (A) Ensure that the senior QA Representative at the mishap scene takes samples of all fluids (sample kits available in crash trailer), records all instrument readings, retrieves all on-board recorders, and aids in the photographic coverage of the mishap site and wreckage as directed by the Aviation Safety Office.

6. (A/B) Ensure that the basic circumstances of the mishap are understood throughout QA and, particularly when serious injury or fatalities are involved, stress the need for minimizing rumors.
7. (A) Ensure that the IRT investigators take appropriate equipment and materials to the scene of the mishap (coordinate with the Aviation Safety Office).

AOD Assistant Branch Chief, Aircraft Systems Section

1. (A/B) Ensure that appropriate personnel within the maintenance organization are notified. Ensure mobilization of aircraft resources to support air transportation of mishap investigators to the scene, if required.
2. (A/B) Ensure that qualified maintenance personnel proceed to the mishap scene to safe the ejection seats and other aircraft pyrotechnic systems under the direction of the Aviation Safety Office/On-Scene Commander.
3. (A/B/C/D) Institute the “lock-out” procedure in the NASA Maintenance Management System for the affected aircraft/equipment. For Class A and B mishaps, have the Information Technology Manager (ITM) or the designated representative make a CD-ROM copy of the affected aircraft/equipment at the time the database records were locked out. The CD will be delivered to NASA, Chief of Safety or designated representative, as a source of information for the Accident or Incident Investigation Board.
4. (A/B/C/D) Deliver all aircraft and engine records for the aircraft involved in the mishap to the Operations Duty Officer until Mishap Board is named. *(The Duty Officer will hold the records for the Mishap Investigation Board.)*
5. (A/B) Ensure that the basic circumstances of the mishap are understood throughout the maintenance organization and, particularly when serious injury or fatalities are involved, stress the need for minimizing rumors.
6. (A/B/C/D) In the absence of the Assistant Branch Chief, QA Section, ensure notification and performance of the QA functions (Tab H-3).
7. (A) Prepare suitable hangar space for wreckage reconstruction and assist as requested in the reconstruction effort.
8. (A) When directed by the AOD Chief or designated representative, “Unlock” the NASA Maintenance Management System for the affected aircraft/equipment and, if applicable, conduct a complete database purge to remove all reference to the lost equipment/aircraft.
9. (A/B/C/D) Perform the functions of the Maintenance Branch Chief if he/she is unavailable (E-2).

Flight Operations Branch, Chief

1. (A/B) Ensure that appropriate personnel within the Flight Operations Branch are notified of the mishap, including the project pilot.
2. (A/B/C/D) Assess implications of the mishap on pending flight operations and make recommendations to the AOD Chief as required.
3. (A) Assist the Operations Duty Officer, as required, in providing air transportation to and from the scene of the mishap for the IRT.
4. (A/B) Ensure the completion of the Operations Assistant's duties (E-5 and E-6).
5. (A/B) Ensure that the basic circumstances of the mishap are understood throughout the organization and, particularly when serious injury or fatalities are involved, stress the need for minimizing rumors.

Operations Assistant (Designated by AOD Chief)

1. (A) Obtain the training and flight records of the aircrew involved in the mishap and extract the information required to fill out NASA Form 1627, NASA Mishap Report. Append any additional information likely to be useful to the Mishap Investigation Board. Deliver the flight and training records of the aircrew involved to the AOD Operations Duty Officer to hold for the Mishap Investigation Board.
2. (A/B) Ensure that all AOD operations personnel are informed of the basic circumstances of the mishap. Emphasize the suppression of rumors particularly where injury or fatality requires notification of next of kin.
3. (A) In the event of fatality, collect, secure, and maintain a positive "chain of custody" of all personal effects and sensitive information related to injured or deceased individuals including contents of locker, helmet bin, and desk (*AOD personnel*).

NOTE

The AOD Administrative Assistant will assist in opening lockers.

4. (A/B) Obtain the following documents for the Mishap Investigation Board (*as soon as possible*).
 - a. Flight plan of aircraft involved in mishap.
 - b. Weather briefing for the flight (175-1).
 - c. Written synopsis of weather for the route of flight and at the mishap site from local and national weather services.
5. (A/B) The AOD Chief may direct you to perform the functions of the Flight Operations Branch Chief (E-4).

APPENDIX F FLIGHT CREW OPERATIONS DIRECTORATE

In the event of a mishap, perform the following steps:

1. (A/B) Notify key personnel. Advise the JSC Director concerning severity and impact of the mishap. Advise the JSC Director that the Aviation Safety Office will be making a telephone report to NASA HQ Safety.

CONTACT	TIME NOTIFIED	OTHER PERSON TAKING CALL
JSC Center Director		
Chief, Aircraft Operations Division		
Chief, Astronaut Office		
Chief, FCOD Aviation Safety Office		
Director, Public Affairs Office		
Director, Human Resources		
Chief Counsel		

2. (A) In the event of fatalities, coordinate with the Center Director, Chief of the Astronaut Office, Director of Human Resources, and Director of Public Affairs prior to notification of next of kin. Notify the next of kin in accordance with the Casualty Assistance Control Officer (CACO) form. The FCOD Director, accompanied by NASA flight surgeon, and either the Astronaut Office Chief or the AOD Chief (as applicable), will personally notify the next of kin of crew members. Ensure that the Public Affairs Office and Director of Human Resources are informed that the next of kin has been contacted. Determine if the JSC Director wishes to participate in the notification of the next of kin.
3. (A) If necessary, ensure that personal effects are collected from work desks and lockers (AOD, Astronaut Office, Personal Equipment, Gym) by a responsible AOD/Astronaut Office (as applicable) employee.
4. (C/D) Coordinate the designation and notification of a Mishap Investigation Board.
5. (A/B/C/D) Notify the Program Office of aircraft mishaps that impact the Space Shuttle Program.

APPENDIX G ASTRONAUT OFFICE

If informed of a Type A mishap involving loss of life of a member of the Astronaut Office, accomplish the following steps:

1. (A) Accompany FCOD Director, Flight Surgeon, and JSC Director (as desired) during the personal notification of the next of kin of Astronaut Office personnel when required. Ensure that Public Affairs and Human Resources are informed when the next of kin are notified.
2. (A) In the event of fatality, collect, secure, and maintain a positive “chain of custody” of all personal effects and sensitive information related to injured or deceased individuals including contents of locker, helmet bin, and desk (*Astronaut Office personnel*).

APPENDIX H MEDICAL ACTION PLAN

The following actions will be taken in the event of a Type A mishap (aircraft accident).

Notification Plan

- **During working hours (7:30 a.m. – 4:30 p.m. CST):** Flight Medicine Clinic (FMC) is notified of the accident via the JSC crash network or the Operations Duty Officer.
 1. The Doctor of the Day (DOD) will be notified, if not already aware.
 2. The DOD/FMC will contact the Chief, Clinical Services Branch; Chief, Medical Operations Branch; and the on-call Medical Operations Contingency Coordinator.
 3. The Chief, Clinical Services Branch (primary) or Chief, Medical Operations Branch (secondary) will contact the Chief, Space Medicine Division.
 4. The Chief, Space Medicine Division (Mail Code: SD) will contact the Director, Space Life Sciences Directorate (Mail Code: SA).
 5. The Medical Contingency Coordinator will perform additional accident notifications within the Space Medicine Group as directed by medical management.
 6. If any links in this notification chain are not available, those most senior should make the notification, ensuring both Space Medicine Division and Space Life Sciences Directorate personnel are notified in a timely manner.
- **After working hours:** Medical Officer of the Day (MOD) is notified of the accident via pager by the EOC.
 1. The MOD will contact the Chief, Clinical Services Branch; Chief, Medical Operations Branch; and the Medical Operations Contingency Coordinator.
 2. The Chief, Clinical Services Branch (primary) or Chief, Medical Operations Branch (secondary) will contact the Chief, Space Medicine Division.
 3. The Chief, Space Medicine Division will contact the Director, Space Life Sciences Directorate.
 4. The Medical Contingency Coordinator will perform additional accident notifications within the Space Medicine Group as directed by medical management
 5. If any links in this notification chain are not available, those most senior should make the notification, ensuring both Space Medicine Division and Space Life Sciences Directorate personnel are notified in a timely manner.

Response Plan:

NOTE: Aircraft accidents are managed by responding On-Scene Commanders of local, state, and or federal Government agencies. NASA has no authority over the accident site until it has been handed over.

The responding (DOD or MOD) flight surgeon will report to the Operations Duty Office, Hangar 276, East Side 2nd floor or the JSC EOC as directed by the AOD Operations Duty Officer or other authorizing personnel. He/She will liaison with the AOD Operations Duty Officer and provide updates (e.g., number of crew involved, location, medical condition, etc.) to JSC Medical Management.

1. The responding physician collect pertinent information related to crew members and the accident, notifying medical management and communicating with outside agencies as needed.
2. The responding flight surgeon will ensure applicable toxicology testing is accomplished on mishap crewmembers.

If required, the Chief, Medical Operations Branch will identify additional Flight Surgeon(s) to respond as needed (e.g., hospital, families, accident scene, mishap investigation etc.)

- The on-call Medical Contingency Coordinator will respond to assist assigned flight surgeon(s) following completion of notification duties. The Flight Surgeon/Contingency Coordinator should report to the On-Scene Commander and follow his/her lead.
- Flight Surgeon/Contingency Coordinator should contact the Chief, Medical Operations Branch if additional support is required.

NOTE: In the event of a death or serious injury, additional medical personnel will support as directed by the Chief, Clinical Services Branch.

If required, the mishap-assigned Flight Surgeon and Medical Contingency Coordinator will coordinate activities with the coroner that has jurisdiction. NASA prefers to use the services of AFIP at the Dover AFB Port Mortuary, if possible.

The Chief, Clinical Services Division will ensure that the medical and dental records of involved NASA aircrew are sequestered, if required. If a formal investigation board is activated, the Chief, Space Medicine Division will assign supporting Flight Surgeons. The Medical Contingency Coordinator Group will assist these Flight Surgeons, as needed.

APPENDIX I CENTER OPERATIONS DIRECTORATE

Staff Duty Officer Crash Notification Checklist

When informed of a JSC Type A or B aircraft mishap, contact the following personnel immediately.

CONTACT	TIME NOTIFIED	OTHER PERSON TAKING CALL
JSC, Director		
FCOD, Director		
AOD, Chief		
AOD, Duty Officer		
PAO, Director		
Human Resources, Director		
Chief Counsel		
ALTERNATE CRASH NOTIFICATION CHECKLIST		
JSC, Deputy Director		
Associate Director (Management)		
FCOD, Deputy Director		
Human Resources, Assistant Director		
Media Operations, Chief		
Attorney Advisor		

Emergency Dispatch Center Crash Notification Procedures

Responsible for maintaining 24-hour coverage of the Ellington Field-JSC crash telephone network. (*The JSC crash network is tested weekly.*) Coordinates radio/telephone communications to and from the crash site.

1. During working hours (7:30 a.m. – 4:30 p.m. CST), activate the JSC Crash Network and notify the Security Supervisor.
2. After working hours, assume responsibility as the initial JSC point of contact. Record the information requested in Appendix M, Aircraft Mishap Essential Information (*needed for crash assistance and notification*). Quickly notify the personnel listed below and advise the Security Supervisor.

PRIMARY CONTACT	ALTERNATE CONTACT	TIME NOTIFIED	OTHER PERSON TAKING CALL
Medical Officer of the Day Pager: (888) 439-2084	Manager, Medical Operations		
Chief, FCOD Aviation Safety Office,	FCOD Aviation Safety Officers		
Aircraft Operations Division (AOD) Operations Duty Officer	Chief, AOD		
JSC EOC	JSC Director		
	JSC Deputy Director		
	Chief, Security Office		
JSC Safety	Lead, Safety and Test Operations Division		

Security Supervisor Mishap Procedures

1. (A/B) Dispatch patrol units to crash site (local area is defined as a radius of 50 miles from JSC). Determine if classified equipment was involved in the mishap and plan to protect classified equipment if required.
2. (A/B) Ensure that the necessary medical, fire, and police units have been advised. After duty hours, ensure that the Security Duty Officer, Medical Officer of the Day (MOD), FCOD Aviation Safety Office, AOD Operations Duty Officer, and JSC Safety have been advised.
3. (A/B) For mishap locations other than Ellington Field, refer to A-7 (if applicable).

APPENDIX J PUBLIC AFFAIRS OFFICE

1. (A) When advised by the AOD Operations Duty Officer, send a Public Affairs Office Interim Response Team representative to Ellington Field for transportation to the mishap site to handle release of information. Upon arrival at the mishap site, the representative reports to the JSC On-Scene Commander.
2. (A) Withhold names of any person seriously injured or killed until the next of kin have been notified.
3. (A/B) Coordinate release of information concerning the mishap to the news media with the On-Scene Commander or Mishap Board Chairman, as appropriate. Contact JSC Director and FCOD Director/AOD Chief prior to any media release.

NOTE

NASA Headquarters Office of Public Affairs must approve the release of all information related to NASA Type A and B mishaps, prior to its release to the public or press.

4. (A/B) Ensure that the JSC Director is continually advised of Public Affairs Office aspects of the mishap.
5. (A/B/C/D) Safeguard the release of mishap information in accordance with JPR 8621.1, paragraph 5b and paragraph 5d(2). Provide public information assistance as required to the Mishap Investigation Board.

APPENDIX K HUMAN RESOURCES OFFICE

1. (A) Contact the JSC Director and the FCOD Director prior to any contact of the next of kin.
2. (A) Once coordinated, the notification of the next of kin should promptly follow the mishap.
 - a. JSC Aircrew Members: The FCOD Director and either the AOD Chief or the Astronaut Office Chief (as appropriate) accompanied by a Flight Surgeon will notify the next of kin of JSC aircrew members.
 - b. Non-Aircrew NASA Employees: Ensure that the instructions of the JSC Director for personal involvement are followed in the notification of the next of kin of all NASA employees in the event they are involved in the mishap.
3. (A) Ensure that the Public Affairs Office is informed when the next of kin have been notified to facilitate release of pertinent information to the news media.
4. (A) Coordinate, with AOD, grief counseling sessions and EAP meetings as necessary to assist other AOD employees and critical incident response teams.

APPENDIX L

DIRECTOR, JOHNSON SPACE CENTER

Perform the following actions after an aircraft mishap:

1. (A/B/C) Personally report, by telephone or e-mail, to the Administrator within 24 hours of a NASA Type A, Type B, or Type C (only if involving a lost-time injury or illness) mishap.
2. (A) Coordinate with FCOD Director for the notification of next of kin.
3. (A/B) Assign, via formal memorandum, personnel to the mishap investigation board (MIB) to include chairman, members, ex officio, and advisors (refer to NPR 8621.1, paragraph 4.2 for specific requirements). Obtain concurrence from the NASA Headquarters (Chief, Office of Safety and Mission Assurance and the Chief Engineer) of the MIB.
4. (A/B) Coordinate with the Center Public Affairs Office about release of mishap information to the public or press.

NOTE

NASA Headquarters Office of Public Affairs must approve the release of all information related to NASA Type A and B mishaps prior to its release to the press or public.

APPENDIX N
JSC 05900 ATTACHMENT 5 CHANGE RECORD HISTORY

Rev	Date	Originator/Phone	Description
Rev D	Feb 2003	S. Reagan/49628 S. Wells/49810	Complete Revision.
PCN 1	Feb 2004	S. Reagan/49628 S. Nagel/49535	Updated pages vi, vii, and viii of the Reference Number List. On page E-1, changed the number for Reference #15. On page G-4, changed the number for James Locke. Also, deleted James Polk from the list. Replaced Craig L. Fischer with Nitza Cintron, M.D., Ph.D. On page K-1, changed the number for Reference #16. On L-1, added Revision D, PCN 1 to the formal changes list.
Rev E	Dec 2004	S. Reagan/49628 S. Nagel/49535	Complete Revision.
Rev F	Oct 2006	B. Ehrenstrom/49755	Complete Revision.